

CLAIMS

1. A method for internet protocol (IP) address allocation comprising the step of:
5 requesting by a mobile station an activation for a unique IP address for an external network;
10 statefully obtaining by a network the unique IP address from the external network; and
transmitting the unique IP address by the network to the mobile station.

2. A method for IP address allocation as claimed in claim 1, wherein the step of statefully obtaining
15 includes the step of soliciting by the network access to an address server within the external network.

3. A method for IP address allocation as claimed in claim 2, wherein the step of statefully obtaining
20 further includes the step of sending by the address server an advertisement message to the network.

4. A method for IP address allocation as claimed in claim 3, wherein the step of statefully obtaining
25 further includes the step of responsive to said advertisement message, requesting by the network the unique IP address via an address request message.

5. A method for IP address allocation as claimed in claim 4, wherein the step of statefully obtaining
30 further includes the step of responsive to the address request message, assigning the unique IP address to the network for use by the mobile station.

35 6. A method for IP address allocation as claimed in claim 5, wherein there is further included a step of

performing a duplicate address detection procedure by the network on the unique IP address to insure uniqueness of the unique IP address.

- 5 7. A method for IP address allocation as claimed in claim 6, wherein there is further included the step of sending by the network the unique IP address to the mobile station.
- 10 8. A method for IP address allocation as claimed in claim 7, wherein there is further included the step of sending by the network an address prefix of the external network to the mobile station.

9. In a mobile network, a method for obtaining an internet protocol (IP) address comprising the steps of:
requesting by a mobile station an activation for a
5 unique IP address for an external network;
statefully obtaining by the mobile network the unique IP address from the external network; and
transmitting the unique IP address by the mobile network to the mobile station.

10 10. A method for IP address allocation as claimed in claim 9, wherein the step of statefully obtaining includes the step of soliciting by the mobile network access to an address server within the external
15 network.

11 11. A method for IP address allocation as claimed in claim 10, wherein the step of statefully obtaining further includes the step of sending by the address server an advertisement message to the mobile network.

20 12. A method for IP address allocation as claimed in claim 11, wherein the step of statefully obtaining further includes the step of responsive to said advertisement message, requesting by the mobile network the unique IP address via an address request message.

25 13. A method for IP address allocation as claimed in claim 12, wherein the step of statefully obtaining further includes the step of responsive to the address request message, assigning the unique IP address to the mobile network for use by the mobile station.

30 14. A method for IP address allocation as claimed in claim 13, wherein there is further included the step of performing a duplicate address detection procedure by

the mobile network on the unique IP address to insure uniqueness of the unique IP address.

15. A method for IP address allocation as claimed in
5 claim 14, wherein there is further included the step of sending by the mobile network the unique IP address to the mobile station.

16. A method for IP address allocation as claimed in
10 claim 15, wherein there is further included the step of sending by the mobile network an address prefix of the external network to the mobile station.

17. A network method for allocating a unique IP
15 address comprising the steps of:
receiving a request for a unique IP address;
statefully obtaining the unique IP address from an external network; and
transmitting the unique IP address to a requester.

20 18. A method for IP address allocation as claimed in
claim 17, wherein the step of statefully obtaining includes the step of soliciting by a network access to an address server within the external network.

25 19. A method for IP address allocation as claimed in
claim 17, wherein the step of statefully obtaining further includes a step of requesting by the network the unique IP address via an address request message.

30 20. A method for IP address allocation as claimed in
claim 18, wherein there is further included a step of performing a duplicate address detection procedure by the network on the unique IP address to insure
35 uniqueness of the unique IP address.

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